

REMARKS

Claims 1, 3, 4, 7, 8, 12-15, 19-21, 23, 24, 26, and 28 were pending. The applicants amend claim 1 and present claims 1, 3, 4, 7, 8, 12-15, 19-21, 23, 24, 26, and 28 for examination in view of the following remarks.

Claim Rejections – 35 USC § 103

Claims 1, 3-4, 7-8, 12-15, 19-21, 23-24, 26, and 28 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,759,461 ("Jarvenkyla") in view of *Plastics Additives-An Industrial Guide (2nd Edition)* ("Flick").

Claim 1 recites that, in a plastics pipe with an outer removable skin layer bonded an inner core and an outer removable skin layer, the outer removable skin layer includes “an appropriate amount of an adhesion-reducing additive ... wherein the adhesion reducing additive is an ester of a polyhydric alcohol; and wherein the adhesion-reducing additive in the skin layer is present in an amount of from 0.5% to 10% by weight.” Claim 23 includes similar features.

The office action acknowledges that “Jarvenkyla is silent with the adhesion reducing additive, the amount of reducing additive used and the characteristics of the pipes.”¹ The proposed combination of Jarvenkyla and Flick, cited as allegedly disclosing “glycerol monostearate is widely used in polyolefins as a lubricant, anti-static and anti-fogging agent (waxes 927)”², does not support the conclusion that the pending claims are obvious.

Jarvenkyla notes that “[d]uring the formation of the pipe it is possible to introduce an adhesion inhibiting or enhancing agent, depending on the use and the materials selected, between the outer layer and the core pipe.”³ However, rather than remaining silent about the additive, Jarvenkyla specifies that “[i]n a preferred embodiment of the invention, a release agent, such as low molecular weight polyethylene wax, is mixed with the material of the outer layer to facilitate the detachment of the outer layer from the core pipe 2.”⁴ A low molecular weight polyethylene

¹ Office action dated August 19, 2009, page 3.

² Office action dated August 19, 2009, page 3.

³ Jarvenkyla, col. 3, lines 49-52.

⁴ Jarvenkyla, col. 3, lines 52-55.

wax is the only material described by Jarvenkyla as useful for this particular embodiment. Jarvenkyla further describes an alternate embodiment in which “the core pipe is, prior to forming of the outer layer, dipped in a bath containing liquid polymers which act as an adhesion inhibiting layer between the core pipe and the outer layer.”⁵ Jarvenkyla also discloses, in different embodiments, that having different materials for the inner core and outer skin layer can probably lower the adhesion between the core and the skin layers;⁶ that crosslinking enhancing agents between the outer layer and the core pipe can complement the crosslinking reaction of the pipe material in the joint surface and provide lubrication, which is advantageous in that it reduces the adhesion of the protective layer;⁷ and a thin aluminum layer can be provided between the outer layer and the core pipe can facilitate the detaching of the outer layer.⁸ Thus, Jarvenkyla presents a number of different possibilities for modifying adhesion between the core and the skin of the pipe. There is no particular reason for a person of ordinary skill in the art to choose any of these approaches for further development in favor of another of the approaches disclosed.

Moreover, even if a person of ordinary skill in the art were to chose the approach based on adding release agent, Jarvenkyla provides low molecular weight polyethylene wax as an appropriate release agent. In addition, even if choosing another release agent, there is no reason asserted as to why a person of ordinary skill in the art would choose glycerol monostearate from the 13 pages of other waxes listed in Flick for use in this application. Rather than suggesting that glycerol monostearate might effectively be applied to polypropylene pipes of the type claimed by the applicants, Flick states

PETRAC GMS glycerol monostearate is widely used as a balanced internal/external lubricant in rigid PVC injection molding, as well as in PVC film, sheet and bottle compounds. In polyolefins, GMS functions as a lubricant, anti-static and anti-fogging agent.⁹

Thus, there are both a wide range of possible approaches to modifying adhesion between the core and the skin of the pipe and a wide range of possible waxes that could be used in the release

⁵ Jarvenkyla, col. 3, lines 56-59.

⁶ Jarvenkyla, col. 2, lines 43-50.

⁷ Jarvenkyla, col. 4, lines 3-11.

⁸ Jarvenkyla, col. 4, lines 12-17.

⁹ Flick, page 927 (emphasis added).

agent approach. Since KSR, the Federal Circuit clarified that, when the prior art discloses a broad selection of possible solutions to a problem, selecting a particular approach for further investigation does not present the type of situation in which there are a finite number of identified, predictable solutions and is insufficient to support the conclusion that it would have been obvious to try a particular combination.¹⁰ Only impermissible hindsight reconstruction would provide a basis for the proposed combination of references. However, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.¹¹

Although the office action asserts “it would be obvious to one of ordinary skill in the art to combine glycerol monostearate as the wax component in the polypropylene outer layer of Jarvenkyla, because the addition of glycerol monostearate would aid in reducing the adhesion of the outer removable skin layer to the inner core layer of the plastic pipe,” this mere conclusory statement is insufficient to support the legal conclusion of obviousness. The office action asserts that “[t]he adhesive bond between the skin layer and the inner core layer of 0.2 N/mm to 2.0 N/mm would be discovered by routine experimentation of the amount of the adhesive component added to the composition to discover optimal conditions for a pipe as to not cause premature unwanted peeling of the skin layer, but still allow the outer skin layer to be detached when appropriate.” However, neither Jarvenkyla nor Flick discloses the effects of modifying the adhesion in terms of the bond strength that will be obtained.

For at least these reasons, the examiner's articulated reason for modifying Jarvenkyla in view of Flick lacks the rational underpinning necessary to support the legal conclusion of obviousness.¹² Accordingly, the examiner has failed to present a prima facie case of obviousness

¹⁰ *Takeda Chem. Indus. Ltd. v. Alphapharm Pty. Ltd.*, 492 F.3d 1350, 1359-60 (Fed. Cir. 2007).

¹¹ *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600. See also *KSR International Co. v. Teleflex Inc. et al.*, 127 S.Ct. 1727 at 1742 (“A fact finder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.”)

¹² See *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727 at 1740 (2007) citing *In re Kahn*, 441 F.3d 977, 988 (C.A.Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” – emphasis added).

with respect to the independent claims 1 and 23. Accordingly, the pending claims are not obvious relative to the cited references and are allowable.

All of the dependent claims are patentable for at least similar reasons as those for the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

Please apply any charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 09294-0020US1.

Respectfully submitted,

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